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ABSTRACT

The relationships between schools' physical environments and the teachers who work in them were explored. Eleven middle school teachers were interviewed about their orientation toward and operation in their schools. They were asked what they thought were their schools' most important features, how they felt about the buildings, what were its good and bad points, and what changes they had made in their classrooms and buildings. Student behavior management arose as the dominant focus of the interviews; curriculum and instruction were nearly ignored. The teachers varied in their level of awareness or sensitivity to the school environment, its effect on them, and their perception of control over it. Adjustments to the classroom setting were uppermost in their minds, while adjustment to the school beyond their own classrooms was perceived as someone else's domain. Most did not indicate that they used the environment or saw its potential as a curriculum variable. In comments about instruction and the school environment, they were most likely to mention the conveniece of having a classroom located near the library, a book storage area, or other resource materials. Wall space was seldom used for instructional purposes. Some indicated that they organized furniture to support instructional activities, although the typical arrangement remained straight rows of desks and chairs. Virtually all the teachers volunteered information on their use of the environment to control student behavior. Classroom location had some impact on the teachers' social activities and friendship patterns. It is important that preservice teachers be instructed on the effects and uses of school space. (JD)

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AN ANALYSIS OF TEACHERS' PERCEPTIONS OF THEIR SCHOOL ENVIRONMENT

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An Analysis of Teachers' Perceptions
of their School Environment

Remember the school of your student days. Walk down the halls. Smell the smells. Touch the desks and see the boards with lessons chalked on them. Feel the same tensions, excitement, or indifference you felt as a student. Clearly, the physical environment of the school is a vivid part of our memories and, perhaps, an important part of our present and future. But for all the time we have spent in schools, our knowledge of their effects on us and of our ability to affect them is really quite small. Often the buildings are taken for granted, while we focus our attention on the people activities within them.

Environmental psychologists have begun to demonstrate that we are constantly shaping and being shaped by the environment around us, that people activities, such as teaching and learning, cannot proceed without affecting and being affected by the places in which they occur. This being the case, educators must now shake off their seeming indifference to the schools in which they work, and begin to learn the effects of the environment on them and on their students. Further, they must try to understand how they can use the environment to improve students' learning and their own job satisfaction.

Until recently, the literature on educational environments has focused primarily on social and psychological elements, rather than on the physical. Then, too, most of this research has been concerned with students in the classroom, rather than with those who direct the learning activities of

students in the entire school. The following report describes a study initiated to explore the relatively uncharted relationships between schools' physical environments and the teachers who work in them.

Perspectives on Teacher-Environment Interaction

Stokols (1976) has presented a useful conceptual framework for analyzing how teachers relate to educational space. He identified three modes of human interaction with the physical environment: orientation, operation, and evaluation. Orientation refers to the individual's perception of space. The operation mode focuses on attempts to shape and use the environment. In the final mode, evaluation, people make judgments about the environment. These categories not only organize a discussion of the few environment-teacher interaction studies that have been done, but also structure the study reported here. Those reported studies appear to fall in the operations and evaluations categories; orientation studies do not seem to have been carried out.

Operations. Interest in open space schools has stimulated much of the school environment research including two studies on teacher attitudes and behavior. Coleman (1973) found that significant differences existed in the kinds of teachers who were attracted to and preferred teaching in open space rather than in conventional classrooms. He also found that teaching in open and traditional classrooms affected the attitudes and behavior of

teachers. George (1975), drawing from an examination of open-space versus conventional classrooms, concluded that teachers working in open space settings have not only a greater sense of autonomy than their counterparts in conventional classrooms, but also a greater sense of collegiality.

The transition by a group of teachers from a traditional to a new open-space school gave Gump and Ross (1977) the opportunity to study how teachers modified the curriculum in response to the new open space and how they modified the space to fit the curriculum previously taught. Rivlin and Rothenburg (1976), in another observational study of open space classrooms, identified a pattern of teachers' occupation of a limited proportion of the classroom space in the "front" of the rooms, despite the availability of open spaces within the classrooms.

Evaluation. A major study conducted in Britain by the Building Performance Research Unit (BPRU) in 1972 concluded that teachers evaluated a school as satisfactory based on the age of the building (newer was better) and on the teachers' opportunities for "improvisations" (a combined measure of the number of changes made and the number of spaces with multiple use). Canter (1971) analyzed the same BPRU data and found three major dimensions related to teachers' building satisfaction: atmospheric quality, classroom position, and environmental distractions.

These few studies of teachers' operations and evaluations of the school physical environment provide important contributions to our knowledge but

they have not answered questions about the relationships between the environment and the teachers' sensitivity and control orientations, or about the teachers' operations in the total school space rather than just the classroom. To begin to answer these questions we initiated a small scale study of middle school teachers and their environments.

Talking to Teachers about their Schools

Eleven teachers from two metropolitan middle schools participated in open-ended interviews in which they were questioned about their orientation toward and operation in their respective schools. For example, the teachers were asked what they would tell us about their school building if we were new teachers in it, what they thought were the most important features, how they felt about the building, what were helps and hinderances in the building, and what changes they had made in their classroom and building.

The tape-recorded interviews were transcribed and data from the interviews were coded using a list of physical environment attributes developed from a review of physical learning environment research (Weinstein, 1979). Key attributes were examined for content, focusing on the dominant characteristics and the primary educational components.

The teachers. The teachers (five from one school, six from the other) worked with seventh and eighth graders and taught a variety of subject

areas from language arts to industrial arts. Beginning teachers and teachers with more than 20 years of experience were included among those interviewed, as were both men and women. Selected comments from the various teachers have been chosen to illustrate points in the findings.

Student management arose as the dominant focus of the interviews; curriculum and instruction were nearly ignored. Adjustments to the classroom setting were uppermost in the teachers' minds, while adjustment in the school beyond their own rooms was considered someone else's domain. The teachers were aware of some of the environmental effects of the building on their own interactions with other teachers. This interaction and the relationships between the environment and curriculum, instruction, and student management will be the major discussion points here, but first a few words about the teachers' orientation to their environment.

What Teachers Say About Themselves and their Schools

As one might expect, the interview data indicated that teachers vary in their level of awareness or sensitivity to the school environment, in their awareness of its effect on them, and in their perception of control over it. They also vary in the amount of conscious use they report making of the environment. While they are not always clear about <u>why</u> certain environmental manipulations "work," they are aware that they <u>do</u> work. There is, then, a tacit understanding of the interactive nature of the person and the environment.

The variance in the teachers' sensitivity to the environment, its effects and controlability may be assumed to follow a normal distribution pattern. Some were alert to colors, lighting, space and crowding, furnishings, etc., others were less so. But all seemed to quite readily accept that "this is, after all, a school, and should look like a school." That it might look far more like a home, an office building, or a lounge than it did and still function well, did not seem to be a part of their thinking. It may well be, as one teacher surmised, that the many years spent as students in similar schools have taught them indirectly what schools should be like and how one should use them.

> I'm well aware of what I can and can't do. I need not be told that. I would imagine as a first year teacher, no, I would even think by then you would pick up what you needed during your student teaching. The difference, I think, with this profession . . . is that everybody has grown up--been through the school.

Curriculum, instruction, and the environment. If we try to find evidence that teachers are consciously planning for and using the environment in their efforts to teach a given curriculum, we are somewhat stymied. Most do not indicate that they use the environment, or even see its potential as a curriculum variable. In fact, one might infer that the teachers assume that the curriculum is the textual materials rather than content and outcomes. Thus, the teachers' comments about curriculum and the environment were likely to mention how nice it was to be near the library, near

the book storage area, or convenient to resource materials. Conversely, the teachers complained that being located away from materials and/or others in their subject areas had a negative effect on what they could teach as well as the instructional strategies they used.

A few of the eleven teachers thought about and used wall space in their classrooms for instructional purposes. Unlike primary teachers who seem to use every inch of wall space to teach or reinforce learnings, these middle school teachers provided few alternatives to themselves and the texts as conveyers of content. Social and aesthetic purposes seemed to far outweigh curricular goals. So, for example, students' work related to a particular unit might be placed on the boards, but not as teaching tools. Rather they were often displayed because it "made the students feel good" to see their papers up there. Posters and pictures might be put up, but seldom to convey facts, concepts, or skills. More likely they were described as "creative," "mood altering," or simply "decorative." One teacher claimed that he encouraged "inquiry" by putting provocative quotations and posters around the room.

Some of the teachers did indicate that they organized furniture in their rooms to support instructional activities. There was mention of moving students into circles for discussion, clusters for small group work, and straight rows for lecture. The typical arrangement however, was the inevitable straight row, which was meant to assure that "when I'm giving directions, everybody is looking the same way and I have . . . their

concentration." This exemplifies the overriding concern for minimization of disruption rather than maximization of instruction (though the two are not mutually exclusive, of course).

In addition to some moving of furniture to support instruction, the teachers reported making changes in their rooms by acquiring additional furniture. One teacher talked cleverly of "liberating" tables and filing cabinets from other school areas at the beginning and end of each year in order to furnish her own room. Others talked of trades with colleagues (my tables and chairs for your desks) and negotiations with custodians for such things as a storage closet to be turned into a photo lab.

Student management and the environment. Although teachers offered few comments about their curricular and instructional uses of the environment, virtually all the teachers volunteered information on their use of the environment to control students and school environmental elements that created disruptive behavior among students.

Teachers used both subtle and obvious means for modifying the school setting to gain control of student behavior. The reasons why certain changes are effective may be unclear to teachers, but they could explicitely describe changes and their effects. For example, one teacher explained that she did not know why but that she always found that her desk at the back of the room was always more effective, "For control, for control, for some reason." Teachers also noted that locating their desk at

the side of the room increased their control, because it allowed them to monitor student gathering points within the classroom such as the drinking fountain, pencil sharpener, and classroom door. One teacher was reported to have strategically placed bookcases at the classroom doorway to eliminate hallway distractions, yet allow her to monitor the area outside her classroom--maximum control from minimum intervention.

Some teachers selected furniture and equipment to shape student behavior. One of the teachers told of replacing tables and chairs with desks so that the students would be more serious about their "use-your-own-head kind of work." Such changes, unlike those mentioned earlier to enhance certain kinds of learning, i.e. group problem solving, were affected specifically to reduce disruption and frivolity.

- Teacher interaction and the environment. Though we often tend to focus attention on teachers' behavior in the acts of teaching, their lives in the school also have a personal dimension. Friendships and positive working partnerships combine with classroom experiences to determine the quality of worklife and the teacher's job satisfaction. The school environment appears to play a substantial role in the relationships teachers form with other teachers. For example, the location of teachers in certain classrooms, in combination with building design, can accentuate feelings of teacher isolation. One beginning teacher, assigned a classroom separated from the central part of the school, lamented that: "It gives you a feeling of not being part of the group; you're in a different area." While an

experienced teacher with established friendship patterns might find physical isolation no problem, beginning teachers are extremely vulnerable, as Lortie (1975) pointed out. Already isolated by their own fears of failure, the new teachers are even further cut off by physical separation from those who might support them. Although a common planning time and teacher subject commonality influenced interaction patterns, distance between classrooms appeared to affect the frequency of interaction to a greater extent than the other two factors. In one building, approximately 64 per cent of the colleagues that teachers reported contacting most often were located three or fewer classrooms away from their own classrooms. In the second school, 95 per cent of those most frequently contacted were located six or fewer rooms away. These figures, though based on a limited sample, reflect the well-documented relationship between distance and affiliation in the environmental and social psychological literature (Brookes and Kaplan, 1972; Festinger, 1951; Gullahorn, 1952; Parsons, 1978).

Helping Teachers use the School Environment

The small group of teachers in this study reported almost unanimously that they had been given no direction in the use of the school facilities. Yet, contrary to the opinion of the teacher who believed that one learns all one needs to know about the use of the school environment as a student in the school, teachers do not know much at all about using the environment for curriculum and instruction. They do not know this, despite their

apparently natural use of the environment for classroom management purposes.

It is interesting to speculate on the reasons why teachers so naturally manipulate the environment in controlling disruptive behavior, yet do not transfer the same knowledge to their curricular or instructional efforts. The primacy of concern about control rather than instruction may be the explanation, but it could well be that what one learns to do in natural, or general human situations, may be temporarily forgotten in the process of enacting the more technical aspects of teaching to large groups. If teachers are not receiving guidance in the use of school facilities as part of preservice education, staff development, or as a building orientation when they arrive at a new school, there is little wonder that planning for maximum learning benefits from the environment is so rare.

Educators may work toward optimum use of the school setting to enhance the working and learning environment through a variety of common means including staff development, individual teacher supervision, building use policies, and further teacher involvement in making non-classroom spaces attractive places for the people who live and work in the school. Educators of preservice teachers must challenge the teacher in preparation to question entrenched patterns of school environment use, and must take the responsibility for developing an expanded concept of the effects and uses of school space.

Several general applications of the findings from this study are apparent. First, educators of preservice teachers must provide guidance in the use of physical environment to enhance the curriculum and to support instructional strategies. We must explore with the teacher trainees the ways that the whole school setting maybe used for learning, including support facilities such as the school library, media center, counseling areas, teacher workrooms, administrative offices, and undesignated areas. We must lead the novices in a consideration of classroom furnishings, equipment, decoration, and ambient conditions (lighting, heat, acoustics) so that teachers come to be discriminating in their choice and use of such items.

We must assist preservice teachers to make better use of school facilities to maintain positive student discipline--discipline that is as self-directed and unoppressive as possible and supports a sense of dignity for all individuals. Finally, we must help beginners to an increased sensitivity to the effects of the school environment on themselves. We must assist them in counteracting the isolating nature of many school buildings, and help them to use or compensate for building influences on their efforts to develop a collegial support system for themselves.

The challenge that educators face is similar to that facing outdoor environmentalists. It is the challenge of conserving, maximizing, and enhancing the environment. School settings can be managed to promote learning and enrich the quality of life in schools for students, administrators, and staff. To that end, we are continuing study of teacher-

environment relationships through a variety of approaches. But because school environments and their inhabitants are each unique, thorough examination requires that other educators join us in this study, adding observations and analyses in particular settings to our attempts at generalizations. Your participation in the study of teachers and their schools is invited, and your consideration of the implications for the preservice education of teachers is welcomed.

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